



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,500	06/26/2001	Katsuhisa Itoh	040894-5682	1086

9629 7590 08/28/2002

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

FLORES RUIZ, DELMA R

ART UNIT PAPER NUMBER

2828

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,500

Applicant(s)

ITOH, KATSUHISA

Examiner

Delma R. Flores Ruiz

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2&4. 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "44" and "54" have both been used to designate optical structure. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1 – 4 and 6 – 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Dawes et al. (6,144,795).

Regarding claim 1, Dawes discloses a “laser device” with an optical fiber containing a “laser activating” substance ($R\text{SiO}_{1.5}$, see discussion see below) inside for emitting a beam (see abstract for teaching that light beam, and Fig. 1 Character 10) from a distal end portion thereof, a part (14) of said optical fiber being fixed in a dense state by an optical medium (16), wherein the optical medium (16) is an organic-inorganic hybrid material having a 400° (inherent because the same materials are taught) or lower curing temperature and, wherein once the optical medium (16) is cured a thermal decomposition starting temperature is 300°C (Column 10, lines 23 - 50) or higher, a refractive index lies between 1.40 to 1.56 (Column 2, lines 45 - 59) by an exciting the laser activating substrate, and a transparency loss is 0.5 db/cm (Column 19, lines 22 - 25) or less (Abstract, Column 1, lines 27 - 32, Column 2, lines 45 - 59, Column 10, lines 23 - 50 and Column 19, lines 22 - 25).

Regarding the “laser activating” substance, it's inherentⁱⁿ so, Dawes et al because Dawes et al meets all the claimed structural limitation, i.e. the same materials, to discuss in claims 2 - 5 below.

Regarding the preamble "laser device", because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kropa v. Robie, 88 USPQ 478 (CCPA 1951).

Regarding claims 2 – 4, Dawes discloses a laser device with an optical fiber containing a laser activating substrate inside for emitting a laser beam from a distal end portion thereof a part of said optical fiber being fixed in a dense state by an optical medium, wherein the optical medium is an organic-inorganic hybrid material including a repeating unit represented by a general formula $\text{RSiO}_{1.5}$ further wherein R is selected from an alkyl group, a hydroxyl group a phenyl group, a vinyl group, a 2-chloroethyl group, a 2-bromoethyl group, a hydrogen, a heavy hydrogen, a fluorine and an oxygen, said R with entire oxygen being excluded, said R in each repeating unit being permitted to be different, the optical medium contains an oligomer or polymer including at least one member selected from a group consisting of a polymethyl silsesquioxane, a polymethyl-hydride silsesquioxane, a polyphenyl silsesquioxane, a polyphenyl-methyl silsesquioxane, a phenyl silsesquioxane-dimethyl siloxane copolymer, a polycyclopentyl silsesquioxane, a polyhydride silsesquioxane, a poly(2-chloro ethyl) silsesquioxane,

and a poly(2-bromo ethyl) silsesquioxane or a mixture of said at least one member and polysiloxane and the optical medium contains an amorphous silica produces by curing at least one member selected from a group consisting of a poly(2-chloro ethyl) silsesquioxane a poly(2-bromo ethyl) and a mixture thereof (Column 1, lines 17 – 32, Column 4, lines 20 – 64, Column 5, lines 13 – 67, Column 6, lines 14 – 67, and Column 7, lines 1 – 17).

Regarding claims 6 – 8, Dawes discloses a laser device with an optical fiber containing the optical fiber is fixed in a bundled state (Figs. 1 and 3A-H). A flat surface is formed on a side surface of the optical fiber such that the optical fiber is fixed in the state with the flat surface closely contacted with one another and a light signal amplifying device comprising a distal end portion of the optical fiber of the laser device as an input end of a signal light, and the distal end portion as an output end of an amplified light (Figs. 1 and 3A-H and Column 1, lines 35 – 64).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dawes et al (6,144,795) in view of Ueda et al (6,052,392).

Regarding claim 5, Dawes discloses the claimed invention except for optical fiber is wound in a spiral shape or coil-like shape. It would have been obvious at the time of applicant's invention, to combine Ueda et al of teaching a optical fiber is wound in a spiral shape or coil-like shape with laser device because the conglomerate form may be a disc shape, a cone shape, a regular polyhedron shape, a truncated polyhedron shape, an ellipse shape, a cocoon shape, an ellipsoid of revolution shape, a spiral shape, a sphere shape, a donut or ring shape, a torus shape, a fabric shape, or a shape linearly converted from one of those shapes, or a shape in combination of all or part of those shapes. The optical guide is made of an optical fiber in the conglomerate form having at least an optical waveguide. The optical fiber in the conglomerate form is made immobile by covering all or a part of the optical fiber with a setting substance transmittable of the excitation light. The setting substance can be selected from a setting organic resin or glass, or a setting inorganic medium. The optical fiber in the conglomerate form may be made immobile mutually with an adjacent optical fiber by unitedly formed so that all or a part of the optical fiber is in contact with the adjacent optical fiber in a manner that each interface between a core and a clad of the optical fiber and the adjacent optical fiber is not impaired. The optical guide is either a double

Art Unit: 2828


clad type optical fiber or an optical waveguide, formed with a clad and a second clad placed outside the clad.


Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (703) 308-6238. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.


Delma R. Flores Ruiz
Examiner
Art Unit 2828


QUYEN LEUNG
PRIMARY EXAMINER


Paul Ip
Supervisor Patent Examiner
Art Unit 2828

DRFR/PI
August 22, 2002